How do doctors make decisions when managing care for critically and terminally ill patients?

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With the U.S. population aging rapidly, more resources are being dedicated to understanding how doctors make decisions while caring for critically ill, older patients at the end of their lives. If faced with an elderly, critically ill patient who has expressed the wish not to be intubated, for example, which factors affect the doctor's decision about whether to abide by the patient's preference? In a study recently published in *Medical Decision Making*, researchers from The Dartmouth Institute for Health Policy and Clinical Practice and the University of Pittsburgh used a simulated patient encounter describing a man in his late 70's with metastatic cancer and worsening vital signs to study the decision-making process of 73 hospital-based physicians at three major academic mental centers.

"There's a lot of variation in the treatment of seriously ill, older patients at the end of their lives," said Dartmouth Institute Professor and senior author Amber Barnato. "Some of this variation is likely driven by the doctor's own beliefs and biases regarding end-of-life treatment. So, if we're able to get a deeper understanding of how doctors' decision-making processes work, potentially we can identify opportunities and strategies to promote treatment that aligns with patient preferences."

The doctors participating in the simulation were given a chart before entering the room, including a discharge summary from a recent lengthy hospital stay, a report of a one-week old CT scan, and the assessment

and plan from the patient's ER admission. The patient—accompanied by his caregiver wife—had a "do not intubate" order from the nursing facility from which he was admitted, but the order was not transferred to the hospital. In the scenario, the patient and his wife knew he was terminally ill and had approximately 3 to 6 months to live. The patient's preferences were to avoid readmission to the ICU and/or intubation, and to receive comfort-focused treatment, such as pain medication. The patient wanted to make his own decisions, independent of the doctor, however, he is unable to speak more than one or two words at a time. The patient's wife was more passive in decision making and would accept the doctor's recommendation for a treatment plan.

The scenario was designed to induce the experience of time pressure for decision making in two ways: The patient's vital signs met standard criteria for "rapid response team" upon the doctor's entry into the room, and the patient's vital signs steadily deteriorated over the course of the simulation. The simulation ended when the doctor made a treatment plan or 30 minutes had elapsed, whichever came first. After completing the simulation, the doctors watched a video of their encounter while completing a debriefing interview, which was designed to reveal more about their decision-making process.

Sixty percent of the doctors treated the patient with comfort-focused care (according to his preferences), the remaining doctors did not—including 10% of the doctors who actually intubated the patient.

The researchers found that the mental model of doctors who provided treatment that wasn't aligned with the critically and terminally ill older patient's preferences differed in three key ways from physicians who did provide treatment according to patient wishes: They focused on the reversibility or emergent nature of the situation, on inferred rather than explicitly stated patient preferences, and on their own comfort level and preferences. For example, on inferring patient preferences, intubators

inferred consent when the patient or surrogate did not question or object to the doctor's treatment plan. As one intubator said, "... It felt like I had no resistance ...towards aggressive care, so I continued to get more aggressive and escalate care."

The researchers stated that identifying differences in doctors' decision-making processes, or mental models, could help health systems design ways to promote care that was in line with patient preferences, such as the employment of well-structured communication protocols, simulated learning exercises, or focusing on the way young doctors are trained.

"It's important that we recognize how stressful and complex physician decision making can be, particularly in end-of-life situations," Barnato said, "and that we find ways to support it so that all patients at the end of their lives can get the treatment they prefer."

More information: Shannon Haliko et al, Hospital-Based Physicians' Intubation Decisions and Associated Mental Models when Managing a Critically and Terminally Ill Older Patient, *Medical Decision Making* (2017). DOI: 10.1177/0272989X17738958

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